

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

REVISED VERSION

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
26 February 2004 (26.02.2004)

PCT

(10) International Publication Number  
**WO 2004/016173 A1**

(51) International Patent Classification<sup>7</sup>: **A61B 5/22 //**  
A63B 21/00

3 B 7, FIN-40740 Jyväskylä (FI). **RUSKO, Heikki** [FI/FI];  
Rauanniementie 69, Fi-40950 Muurame (FI).

(21) International Application Number:  
PCT/FI2003/000607

(74) Agent: **KESPAT OY**; P.O. Box 601, FIN-40101 Jyväskylä  
(FI).

(22) International Filing Date: 18 August 2003 (18.08.2003)

(81) Designated States (*national*): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
20025038 16 August 2002 (16.08.2002) FI

(71) Applicant (*for all designated States except US*): **FIRST-BEAT TECHNOLOGIES OY** [FI/FI]; Rautopohjankatu 6, FIN-40700 Jyväskylä (FI).

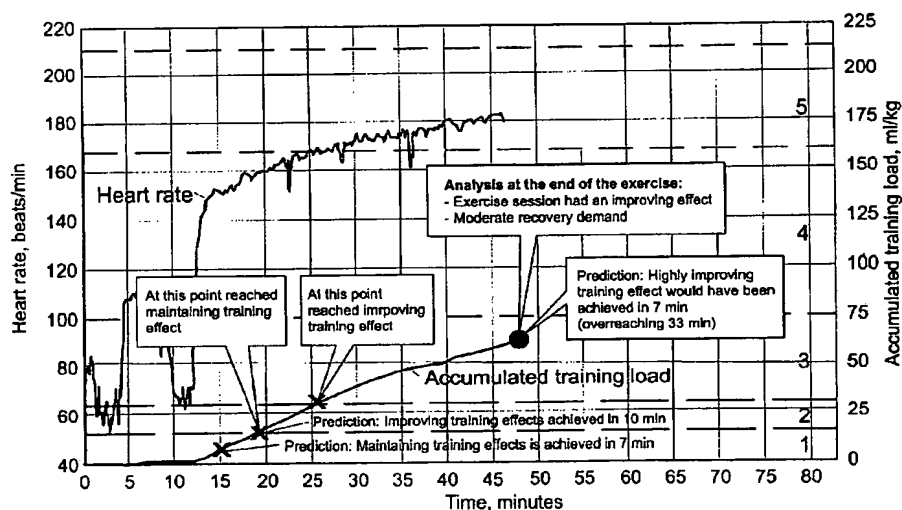
(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **SAALASTI, Sami** [FI/FI]; Majajärventie 3 as 3, FIN-40600 Jyväskylä (FI). **KETTUNEN, Joni** [FI/FI]; Haikantie 3, FIN-40900 Säynätsalo (FI). **PULKKINEN, Aki** [FI/FI]; Auvilanperä

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,

[Continued on next page]

(54) Title: METHOD FOR MONITORING ACCUMULATED BODY FATIGUE FOR DETERMINING RECOVERY DURING EXERCISE OR ACTIVITY



(57) Abstract: The invention relates to a method for determining accumulated body fatigue index (BFI), wherein one or more parameters from the measurement of one or more signals are obtained sequentially as input and these parameters are information on the intensity of physical activity. BFI has a predetermined initial value, and next BFI value is always a sum of BFI-value and a difference. The difference is combination of upslope and optional downslope components of BFI determined with the said parameters and the upslope component and the optional downslope component are each determined with a function, which is scaled by a preset physiological character.



ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the revised international search  
report: 1 July 2004

(15) Information about Correction:  
see PCT Gazette No. 27/2004 of 1 July 2004, Section II

**Published:**

- with international search report
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.